Breast cancer is the most common cause of death from cancer among women in Australia and approximately one in 13 (8%) Australian women will develop breast cancer by the age of 75 years. The major risk factors are age and family history of breast cancer. There is insufficient evidence to encourage or discourage the practice of a systematic approach to breast self examination (BSE) to reduce mortality from breast cancer.

Nevertheless, as most breast cancers are found by women themselves, general breast awareness is encouraged by some authors – based on knowing what is normal, knowing what changes to look for, and encouraging prompt reporting of any changes.

We aimed to determine women’s knowledge, attitudes and stated practices relating to BSE, and assess the influence of age and family history of breast cancer on BSE.

**Method**

We surveyed women aged 35 years and over, in one suburban Adelaide (South Australia) general practice. The survey instrument was a self-administered questionnaire produced using previously validated instruments. Nonrespondents were re-sent the questionnaire after 5 weeks. Monash University Ethics Committee granted approval.

Inclusion criteria were women aged 35 years and over with no personal history of breast cancer and who attended the practice more than twice in the past 4 years. Exclusion criteria included dementia. Frequency of BSE in the past 12 months, self-reported proficiency of BSE technique, age, marital status, number of children, education, and family history of breast cancer were recorded.

Six health belief factors investigated were confidence (perceived procedural competence to perform BSE and perceived ability to detect abnormal lumps), health motivation (general health motivation, beliefs and behaviour related to general concern about health), susceptibility (perceived personal risk of contracting breast cancer), seriousness (perceived degree of personal threat related to breast cancer), and benefits (perceived benefits of BSE) and barriers (perceived negative components of BSE) for the individual.

We explored associations between a family history of breast cancer and BSE monthly and at least 6 times in the past 12 months, using chi-square, and t-tests. We explored relationships of age and health beliefs to BSE frequency using Mantel Haenszel chi-square.

**Results**

We mailed out 514 questionnaires and 312 were returned; 14 responses were excluded because they were either returned too late to be included in the research or the questionnaires were not completed (response rate 58%). In the past 12 months, 84% of participants practised BSE at least once, 41% practised BSE 6-12 times, and 9% practised BSE once per month. Breast self examination at least 6 times in the past 12 months was practised by 56% of married/defacto respondents, 37% of divorced/separated respondents and 30% of widowed respondents. No statistically significant association was found between the number of children, level of education of respondents, nor family history of breast cancer and BSE frequency.

**Table 1. T-test analysis of relationship between overall health beliefs and monthly BSE in the past 12 months**

<table>
<thead>
<tr>
<th>Health beliefs</th>
<th>p value (t-test)</th>
<th>Monthly mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence</td>
<td>0.0002</td>
<td>41.6</td>
<td>8.6</td>
</tr>
<tr>
<td>Health motivation</td>
<td>0.0514</td>
<td>30.2</td>
<td>3.1</td>
</tr>
<tr>
<td>Susceptibility</td>
<td>0.4835</td>
<td>11.8</td>
<td>4.5</td>
</tr>
<tr>
<td>Seriousness</td>
<td>0.5686</td>
<td>19.9</td>
<td>5.1</td>
</tr>
<tr>
<td>Benefits</td>
<td>0.0027</td>
<td>23.9</td>
<td>2.9</td>
</tr>
<tr>
<td>Barriers</td>
<td>0.0003</td>
<td>9.5</td>
<td>2.9</td>
</tr>
</tbody>
</table>
analysis of health beliefs and monthly BSE.

Women had some confidence in their ability to perform BSE and detect breast lumps, were well motivated to maintain good health, did not perceive a serious threat from, or personal susceptibility to breast cancer, and believed that BSE had personal benefits. Perceived personal barriers negatively influenced BSE practice at any frequency. Worrying about breast cancer, feeling embarrassed, taking too much time and being unpleasant, were related to monthly BSE. Confidence, benefits and barriers were related to BSE monthly (Table 1) and BSE six or more times in the past 12 months. Analysis of 14 proficiency questions found that overall knowledge of the steps involved in the BSE technique was fair to poor.

Discussion

We found that women’s attitudes to breast cancer and BSE influence BSE practices. Family history of breast cancer did not, confirming other studies.7-9 The generalisability of this study may be questionable because it was limited to a single practice, with a response rate of only 58%.

Implications of this study for general practice

What was already known

- The evidence for BSE providing benefits in terms of mortality or morbidity is inconclusive.

This study found

- A low incidence of monthly BSE
- A modest incidence of BSE twice per month
- Women’s attitudes toward BSE and breast cancer influenced BSE practice
- Women’s age and family history of breast cancer did not.

Acknowledgment

We would like to thank Kristyn Willson, statistician, Department of Public Health, University of Adelaide, South Australia.

Conflict of interest: none declared.

References